V.A.5.N.e.14. PLEURAPHIS JAMESII HERBACEOUS ALLIANCE

James' Galleta Herbaceous Alliance

PLEURAPHIS JAMESII HERBACEOUS VEGETATION

James' Galleta Herbaceous Vegetation

ELEMENT CONCEPT

GLOBAL SUMMARY: This widespread grassland association is found on alluvial flats, plateau parks and plains in the Colorado Plateau and elsewhere in the southwestern U.S. Topography varies from mesa tops, slopes, and basin floors. Stands may be small woodland parks or more extensive grasslands on the plains. Soils in bottomland stands tend to be fine-textured; however, stands also occur on sandy loams. Vegetation is characterized by a relatively sparse to moderately dense (10-60% cover) herbaceous layer that is strongly dominated by the warm-season bunchgrass *Pleuraphis jamesii*. Low cover of other grasses, such as *Achnatherum hymenoides, Bouteloua eriopoda, Bouteloua gracilis, Hesperostipa comata, Muhlenbergia porteri, Sporobolus airoides*, or *Sporobolus cryptandrus*, may be present. Forb cover is usually sparse and includes species of *Plantago, Gilia, Lappula*, and prickly pear cacti (*Opuntia* spp.). Many species of shrubs and dwarf-shrubs may be present; however, they are not dense enough to form a shrub layer. Some stands have high cover of cryptogams on the soil.

ENVIRONMENTAL DESCRIPTION

USFWS Wetland System: Not Applicable

Zion National Park Environment: This association occurs at approximately 4000 feet, on level terrain of plateaus. Soil texture is sandy loam.

Global Environment: This widespread grassland association is found on alluvial flats, plateau parks and plains in the Colorado Plateau and elsewhere in the southwestern U.S. Elevation ranges from 1220-1660 m. Topography varies from mesa tops, slopes, and basin floors. Stands may be small woodland parks or more extensive on the plains. Soils in bottomland stands tend to be fine-textured; however, stands also occur on sandy loams.

VEGETATION DESCRIPTION

Zion National Park Vegetation: *Pleuraphis jamesii* is dominant in this association with 10-30% cover at the sampled sites. *Opuntia* spp., *Gutierrezia microcephala*, and *Bromus tectorum* are present with minimal cover. This association occurs in parks amongst *Pinus monophylla - Juniperus osteosperma* woodlands with *Pleuraphis jamesii* in the understory.

Global Vegetation: This association is characterized by a relatively sparse to moderately dense herbaceous layer (10-60% cover) that is strongly dominated by the warm-season bunchgrass *Pleuraphis jamesii*. Low cover of other grasses such as *Achnatherum hymenoides, Bouteloua eriopoda, Bouteloua gracilis, Hesperostipa comata, Muhlenbergia porteri, Sporobolus airoides*, or *Sporobolus cryptandrus* may be present. Forb cover is usually sparse and includes species of *Plantago, Gilia, Lappula*, and prickly pear cacti (*Opuntia* spp.). Many species of shrubs and dwarf-shrubs may be present, but they are not abundant enough to form a shrub layer. Woody species may include *Artemisia filifolia, Atriplex canescens, Atriplex confertifolia, Ephedra torreyana, Ericameria nauseosa, Gutierrezia* spp., *Tetradymia* spp., and occasional *Juniperus monosperma* trees. The widespread introduced annual grass *Bromus tectorum* and several other exotic species like *Salsola kali, Bassia scoparia (= Kochia scoparia), Sisymbrium altissimum* may be present to abundant, especially on disturbed sites. Some stands have high cover of cryptogams on the soil including *Collema tenax, Tortula ruralis, Bellia papillata*, and *Fulgensia bracteata*.

Global Dynamics: *Pleuraphis jamesii* is both drought- and grazing-resistant (USFS 1937, Weaver and Albertson 1956, West et al. 1972). This grass is favored in mixedgrass stands because it is only moderately palatable to livestock; however, it decreases when heavily grazed during drought and in the more arid portions of its range where it is the dominant grass (West et al. 1972). This grass reproduces extensively from scaly rhizomes. These rhizomes make the plant resistant to trampling by livestock and have good soil binding properties (USFS 1937, Weaver and Albertson 1956, West et al. 1972).

MOST ABUNDANT SPECIES

Zion National Park

Stratum	Species
GRAMINOID	*Pleuraphis jamesii*

Global

Stratum	Species
GRAMINOID	*Pleuraphis jamesii*

CHARACTERISTIC SPECIES

Zion National Park

Stratum	Species
GRAMINOID	*Pleuraphis jamesii*

Global

Stratum	Species
GRAMINOID	*Pleuraphis jamesii*

GLOBAL SIMILAR ASSOCIATIONS:

- Atriplex canescens / Pleuraphis jamesii Shrubland (CEGL001288)
- Atriplex confertifolia / Pleuraphis jamesii Shrubland (CEGL001304)
- Krascheninnikovia lanata / Pleuraphis jamesii Dwarf-shrubland (CEGL001322)
- Coleogyne ramosissima / Pleuraphis jamesii Shrubland (CEGL001334)
- Artemisia nova / Pleuraphis jamesii Dwarf-shrubland (CEGL001420)
- Atriplex gardneri / Pleuraphis jamesii Dwarf-shrubland (CEGL001441)
- Bouteloua eriopoda - Pleuraphis jamesii Herbaceous Vegetation (CEGL001751)
- Bouteloua gracilis - Pleuraphis jamesii Herbaceous Vegetation (CEGL001759)
- Atriplex obovata / Pleuraphis jamesii - Sporobolus airoides Dwarf-shrub Herbaceous Vegetation (CEGL001775)
- Gutierrezia sarothrae / Sporobolus airoides - Pleuraphis jamesii Shrub Herbaceous Vegetation (CEGL001776)
- Pleuraphis jamesii - Sporobolus airoides Herbaceous Vegetation (CEGL001778)

GLOBAL STATUS AND CLASSIFICATION COMMENTS

Global Conservation Status Rank: G2G4.

Global Comments: This association is defined by the dominance of *Pleuraphis jamesii* in the graminoid layer without codominance of other grass species or the presence of a shrub layer.

ELEMENT DISTRIBUTION

Zion National Park Range: This association is found only in small stands near the southern boundary of the park, on Springdale West quadrangle.

Global Range: This widespread grassland association is found on alluvial flats, plateau parks and plains in the Colorado Plateau and elsewhere in the southwestern U.S.

Nations: US
States/Provinces: AZ CA CO NV UT

ELEMENT SOURCES

Zion National Park Inventory Notes: Plots: RH33, RH34
Classification Confidence: 2 **Identifier:** CEGL001777
REFERENCES: Bourgeron and Engelking 1994, Cannon 1960, Collins 1984, Driscoll et al. 1984, Francis 1986, Francis and Aldon 1983, Helm 1981, Kleiner 1968, Kleiner 1983, Kleiner and Harper 1972, Kleiner and Harper 1977, Marr et al. 1973a, Nichol 1937, Stewart et al. 1940, USFS 1937, Utah Environmental and Agricultural Consultants 1973, Weaver and Albertson 1956, West et al. 1972